Center for Meat Processing Technology

Genetic Improvement of Livestock

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Background

Established in 1991 to develop methods of genetically improving livestock through the use of DNA based genetic markers.

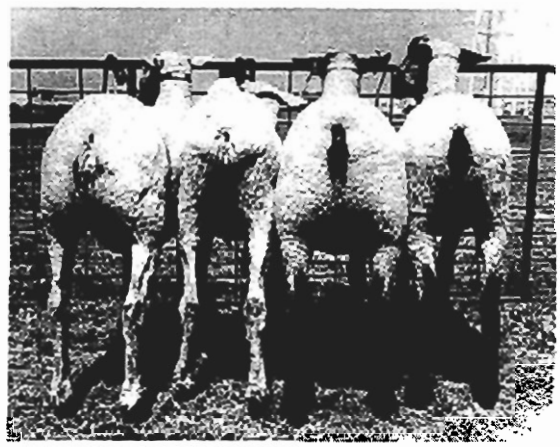
Technology Development Progress

- The Center has characterized specific genetic markers that are associated with a gene that causes heavy muscling and reduced fat in sheep, the gene has been named callipyge.
- The Center has developed a test that is 97% accurate in identifying the callipyge gene; no other laboratory in the world has the available information and, therefore cannot duplicate the test.

Highlights and Accomplishments

- The Center has determined that the callipyge gene provides an **additional $16.06 (10.3%)** to the value of each marketed sheep. If just 25% of the sheep in Utah carried the callipyge gene, the potential added value impact to Utah would be $1.4 million.
- Development of a **commercially-available** genetic marker test for callipyge has been initiated, with its availability being **advertised** through publications, presentations, and other means, with efforts primarily directed toward sheep producers and meat packers.
- The differences in muscle mass in sheep **significantly affect retail yield** and the percentage of carcass weight found within the high-priced cuts.
- The U.S. Sheep Experiment Station has determined that callipyge animals require less feed for each pound of gain (another **economic advantage** of the mutation).
- Animals carrying the callipyge gene are being distributed to Utah sheep producers.
- The Center is offering a service that tests for the presence of the callipyge gene in sheep.

*See newspaper article on page 49



Sheep carrying the callipyge trait show increased muscle mass.

NOTE: In fiscal year 1995-96 the Center for Genetic Improvement of Livestock was combined with the Center for Meat Processing Technology